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EXAMINER

LEE, RICHARD J

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2613	25

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 25

Application Number: 09/274,157

Filing Date: March 22, 1999

Appellant(s): McVeigh et. al.

Michael A. Proksch

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 27, 2002.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

No amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

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(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 1-19 stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) ClaimsAppealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,801,778

JU

9-1998

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ju (5,801,778).

Ju discloses a video encoding with multi-stage projection motion estimation as shown in Figures 1-5, and the same storage medium comprising a plurality of executable instructions, and method and apparatus as claimed in claims 1-19 for performing motion estimation comprising the same receiving a stream of data comprising one or more bidirectionally interpolated frames and a plurality of anchor frames (see column 2,

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lines 18-50); unidirectionally predicting content of each B-frame from a temporally closest anchor frame, wherein the content of the B-frames is unidirectionally predicted from the content of the temporally closest anchor frame and one or more motion vectors, wherein the one or more motion vectors represent an activity measure of the temporally closest anchor frame, wherein the motion vector is determined by a sum of absolute differences in activity within the temporally closest anchor frame, wherein the temporally closest anchor frame selected to unidirectionally predict the content of the B-frame may either precede or supersede the B-frame, wherein the plurality of anchor frames and B-frames contain progressive video content and contain interlaced video content, and the motion estimation circuit generates a motion vector based at least in part on the selected anchor frame (see column 2, lines 30-38; columns 3-4).

(11) *Response to Argument*

Regarding the appellants' arguments at pages 6-7 of the brief filed June 27, 2002 concerning in general that "... the Ju reference is generally drawn to the well accepted method of motion estimation wherein a predicted frame is predicted, on a macroblock by macroblock basis, using information from preceding and/or superseding frames ... In contradistinction to the teachings of the Ju reference, claims 1-19 are generally directed to a method of frame-based motion estimation that is computationally less expensive than conventional motion estimation techniques such as those disclosed in Ju ...", the Examiner wants to draw the appellants' attention to column 2, lines 18-50 of Ju for the particular teachings of wherein B-frames are predicted according to the MPEG-2 standard. Even though the B-frame processing may be provided at the macroblock level, encoding at **the frame level** (see column 2, lines 20-23) is nevertheless being provided by Ju. A review of the appellants' own Specification also reveals the particular frame encoding is being performed at the block level.

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Regarding the appellants' arguments at pages 8-9 of the brief filed June 27, 2002 concerning in general that "... That is, rejected claim 1, for example, is directed to a method of predicting the content of each B-frame based upon a single anchor frame. Rejected claim 1 further limits which anchor frame may be used for predicting the content to the anchor frame that is temporally closest ... Ju does not anticipate, disclose and/or suggest the unidirectional, temporally restrained, frame-based motion estimation process of, for example, rejected claim 1 ... Ju teaches, as presented above, that a single B-frame may have macroblocks which are encoded using content from a number of different predictive sources without regard to which frame is the temporally closes frame ... the Ju reference fails to teach or suggest the required features of unidirectionally predicting content of each B-frame from a temporally closes anchor frame ...", the Examiner respectfully disagrees. It is submitted that Ju, at column 2, lines 30-35, teaches the particular unidirectional forward predictive coding and unidirectional backward predictive coding as alternative B-frame predictions. And it is noted and emphasized that the unidirectional forward and unidirectional backward predictions of B-frames are based on only one direction frame predictions, i.e., preceding and superseding frames, respectively. Under the particular unidirectional backward predictive coding of B-frames within Ju (see column 2, lines 30-35), for example, B frames can contain macroblocks which are unidirectional backward predictive coded using temporal encoding relative to a **subsequent** reference frame, i.e. the temporally closest anchor frame. The Webster's dictionary defines the term **subsequent as to follow close after; and coming after in time, order, or place**. Therefore, it is clearly evident that the particular example of B frame unidirectional backward predictive coding of Ju is based on a temporally closest anchor frame, thereby anticipating the claimed limitations.

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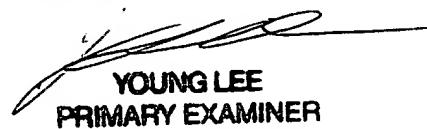
Regarding the appellants' arguments at pages 9-10 of the brief filed June 27, 2002 concerning claims 2-19 and in general that these claims are likewise patentable over the Ju reference for arguments analogous to those used to distinguish claim 1 from the Ju reference, the Examiner wants to point out that such arguments have been addressed in the above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



RICHARD LEE
PRIMARY EXAMINER



YOUNG LEE
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Richard Lee/rl

September 10, 2002

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